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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/829,880	04/11/2001	Joseph M. Joy	03797.86779	8538

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EXAMINER	
KNOLL, CLIFFORD H	
ART UNIT	**PAPER NUMBER**
2112	9

DATE MAILED: 04/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/829,880	JOY ET AL.	
	Examiner	Art Unit	
	Clifford H Knoll	2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 January 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14,16-18,21,22,26 and 27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *16, 18* is/are allowed.

6)☒ Claim(s) *1, 6-9, 14, 17, 21, 22, 26, 27* is/are rejected.

7)☒ Claim(s) *2-5 and 10-13* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6,7*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is responsive to the communication filed 1/27/04 and entered as paper number 8. Information disclosure statements, filed prior to, but only entered after the previous Office Action as papers 6 and 7 are considered in the current Office Action.

Claims 15, 19, 20, and 23-25 have been cancelled. Claims 1-14, 16-18, 21, 22, and 26-27 are currently pending. Claim 27 has been introduced by amendment.

Claim Rejections - 35 USC § 102

Claims 1, 6-9, 14, and 26 stand rejected under 35 U.S.C. 102(e) as being anticipated by Momona (US 6434117).

Regarding claims 1 and 9, Momona discloses the method and computer-readable medium comprising computer instructions for translating a bus-generic request for a quality of service connection into a bus-specific request for time-guaranteed delivery services and transmitting the bus-specific request to an intended receiving node on the bus (e.g., col. 5, lines 19-24, col. 8, lines 30-33), at the intended receiving node, checking to determine whether sufficient resources are available to allocate an isochronous data channel on the bus and allocating it (e.g., col. 6, lines 32-35, col. 8, lines 37-40), notifying the transmitting node and transmitting data packets to the intended receiving node (e.g., col. 6, lines 44-47, col. 9, lines 13-16).

Regarding claims 6 and 14, Momona also discloses periodically transmitting a "keep alive" message, monitoring the "keep alive" message (e.g., col.8, lines 47-54), and in response to detecting the "keep alive" message is no longer being periodically transmitted, deallocating the bus resources (e.g., col.8, lines 61-67).

Regarding claim 7, Momona also discloses an IEEE-1394 serial bus (e.g., col.4, lines 1-4).

Regarding claim 8, Momona also discloses step (2) performed in response to a quality-of-service request made by an application program executing in the transmitting mode (e.g., col.4, lines 20-22).

Regarding claim 26, Momona discloses transmitting a request for time-guaranteed bandwidth using the isochronous communication mode (e.g., col.9, lines 5-7), in response to detecting a time-out condition for failing to receive a response to the request transmits data packets to the second computer node using the asynchronous communication mode (e.g., col.11, line 62 – col.12, line 5).

Claim Rejections - 35 USC § 103

Claims 17, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haviland (US6600756) in view of Momona.

Regarding claims 17 and 21, Haviland discloses method and computer-readable medium comprising computer instructions for transmitting data packets using the asynchronous mode of data transmission (e.g., col.3, lines 45-46); detecting that data

packets are repeatedly received from the transmitting node and allocating an isochronous data channel on the bus, notifying the transmitting node of the allocated isochronous data channel and transmitting the data packets on the isochronous data channel (e.g., col.3, lines 45-50). Haviland does not expressly mention the details of sending a "keep alive" message; however this is disclosed by Momona. Momona discloses periodically transmitting a "keep alive" message indicating resources have been allocated, monitoring the "keep alive" message (e.g., col.8, lines 47-54), and in response to detecting the "keep alive" message is no longer being periodically transmitted, deallocating the bus resources (e.g., col.8, lines 61-67).

It would be obvious to combine Momona with Haviland because Momona teaches the means to improve the operation of a IEEE-1394 bus system, such as that of Haviland, by disclosing details of isochronous and asynchronous multicast means. Therefore it would be obvious, at the time the invention was made, for a person of ordinary skill in the art to combine Momona with Haviland.

Claims 22 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haviland and Momona as applied in claims 21 and 17 respectively, above, in view of Ben-Dor (US 2002/0141418).

Regarding claims 22 and 27, Haviland does not mention a common IP address; however this feature is disclosed by Ben-Dor. Ben-Dor discloses a common IP address (e.g., paragraph [0041].

It would be obvious to combine Ben-Dor with Haviland because Ben-Dor teaches the use of his feature with the IEEE-1394 bus, and also maintaining all functionality of relevant features (e.g., isochronous, asynchronous protocols, see paragraph [0055]). These are precisely the features taught by Haviland, thus the teaching of Ben-Dor is expressly intended for use in a bus apparatus such as Haviland. Therefore it would be obvious at the time the invention was made to a person of ordinary skill in the art to combine Ben-Dor with Haviland.

Allowable Subject Matter

Claims 16 and 18 are allowed.

Claims 2-5 and 10-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments filed 1/27/04 have been fully considered regarding rejection of claims 1, 6-9, 17, 21, 22, 26, but they are not persuasive.

Applicant's arguments (p. 12, discussed infra) with respect to claims 2-4, and 10-12 have been fully considered and are persuasive. The rejection of 2-4 and 10-12 has been withdrawn.

Regarding Momona as applied to claims 1 and 9, Applicant argues that "Momona at col. 6, lines 32-35 describes acquiring ownership of a channel for *asynchronous*

communication from the isochronous resource manager" (p. 9); Examiner concurs that cited passage describes the asynchronous communication form of channel allocation, and as interpreted, is misleading. Additional passages cited supra serve to clarify a parallel relationship between the channel allocation for both streaming asynchronous and isochronous modes; in particular the passage demonstrate that the channel allocation cited previously is equally applicable to the isochronous mode of communication. Thus in the additional passage cited above, Momona describes acquiring ownership of the channel, as before, but in the particular instance of an isochronous channel.

Thus the rejection of claims 1 and 9 is maintained

Regarding Momona as applied to claim 26, Applicant argues that Momona "is wholly devoid of any teaching or suggestion of the first computer node transmitting data to the second computer node using the asynchronous communication mode in response to detecting a time-out condition" (p. 11); however Momona discloses precisely this. The cited passage teaches the release of the isochronous channel, which makes the time slot available for asynchronous communication of data packets. This availability is responsive to a time out condition. The recitation of claim 26 is broader than that of related claims 2 and 10; for example, it fails to disclose the alternative relationship with the conditional isochronous communication of data packets, which relationship, taken as a whole, serves to distinguish claims 2 and 10 over Momona. As such, a somewhat different interpretation of Momona as anticipatory in the case of claim 26 is deemed appropriate where no such relationship is established.

Thus the rejection of claim 26 is maintained.

Actually this can be further discussed with reference to the Ikegawa rejection, which has been withdrawn. Ikegawa, as Applicant argues on page 12, fails to disclose "detecting a time-out condition *based on the request transmitted in step (2)*" to which the Examiner would add the further distinguishing recitation, which introduces data packets transmitted "using the allocated isochronous data channel" (claim 1). The Ikegawa rejection relied on independent transmission of data packets on asynchronous and isochronous channels; however, this interpretation fails to teach the relationship that the recitation clearly establishes between "isochronous data channel" data packets, and "*the* data packets" of "the asynchronous delivery mode". Thus arguments presented against Ikegawa are persuasive.

Regarding Haviland in view of Momona, Applicant argues that claim 17, as distinct from the element in Momona, "calls for, periodically transmitting *from the transmitting node* to the intended receiving node a 'keep alive' message indicating that the transmission is continuing". Applicant's interpretation relies on a particular embodiment of Momona (ignoring the general teaching) to distinguish from the claimed invention. The location *in the transmitting node* is a particular detail of the embodiment; in fact, Momona makes provision for either the source or destination node to function in this role. In particular, if the destination requests multicast data, it is the sources that each implement the timer. This is clearly seen in the parallel teaching of asynchronous channel allocation (Figures 5A, 5B) where in the supporting disclosure "the transaction layer *at the source* node checks for the presence of IP multicast data from the

application layer software" (col. 5, lines 14-24, emphasis added). The multicast manager is taught to release the isochronous channel in response to receipt of a session release from a destination node or alternatively "in response to receipt of a session release request from a source node and enters step 1314 to decrement the node count value by one" (col. 10, lines 45-47). If multiple source nodes are transmitting it was clearly the teaching of Momona that the "keep alive" messages are sent from the transmitting node. Otherwise, if a single transmitting node sent an end session as in the particular embodiment argued by the Applicant, it would end a session that has other sources transmitting, which is contrary to sense. If, however, in keeping with the alternate embodiment described here, *the receiving node* is the single node of the multicast session and it received notification to end the session it would end it. It does not require the cessation of the "keep alive" signal to do so because it is the unique receiving node. To do so would be contrary to sense.

It seems by unfortunate coincidence, Momona chose to describe the asynchronous channel allocation according to the multiple source node embodiment (and clearly supported by the Figures 5A and 5B), while describing the isochronous channel allocation according to the multiple destination node embodiment. These embodiments might at first glance appear to remain silent on this particular distinction of the claimed invention; however passages cited above clearly support Momona's intention that the isochronous channel allocation uses both multiple source, or alternatively, multiple destinations in disclosed embodiment of the isochronous channel,

in precisely the same manner as he teaches both embodiments for the asynchronous channel.

Thus the distinctive feature argued by the Applicant is anticipated by Momona, which, in combination with Haviland renders the claimed invention obvious.

The rejection based on Haviland and Momona, in view of Ben-Dor is also affirmed inasmuch as the claims rejected depend on the claims rejected by Haviland and Momona.

Thus claims 1, 6-9, 14, 17, 21, 22, 26 stand rejected; claim 27, introduced by amendment, is newly rejected.

Claims 15, 19, 20, and 23-25 have been cancelled.

Claims 2-5 and 10-13 are objected to.

Claims 16 and 18 are allowed.

Conclusion

An updated search brought additional art to the attention of the Examiner. It is considered similar but not anticipatory of the allowable subject matter. This prior art made of record is not relied upon but is considered pertinent. Lee (US 2003/0217220) discloses selective use of isochronous bandwidth for the purpose of supporting additional quality of service requests. Gokulrangan (US 6658512) discloses selective use of isochronous bandwidth to increase efficiency.

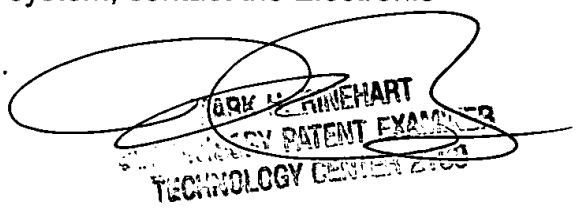
THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clifford H Knoll whose telephone number is 703-305-8656. The examiner can normally be reached on M-F 0630-1500.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark H Rinehart can be reached on 703-305-4815. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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